

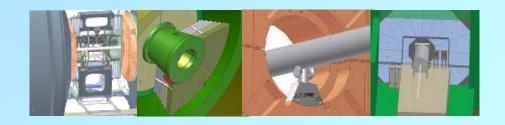
## PHENIX WEEKLY PLANNING



8/26/2010 Don Lynch



| 2010 Shutdown (Overview)  | Start Date  | End Date |
|---|-------------|----------|
| Design, Eng'g, fabrication, procurement and site preparation tasks in support of shutdown tasks | In Progress | 12/1     |
| Shutdown Startup Tasks  | Done        | Done     |
| Gas system maintenance, repair and upgrade  | In progress | 12/1     |
| PHENIX Infrastructure maintenance, repair and upgrade   | In Progress | 12/1     |
| Remove RPC Prototypes   | Done        | Done     |
| Remove HBD  | Done        | Done     |
| Remove RXNP   | Done        | Done     |
| Remove/Reinstall BBC  | In Progress | 9/16     |
| Remove Re-install MPC   | In Progress | 9/16     |
| RPC3N & MuTrigger unfinished business   | In Progress | 9/30     |
| Remove current BP, install new BP   | In Progress | 9/10     |
| DC/PC maintenance and repair (mid summer)   | Done        | 8/13     |
| Install RPC35 (including Absorbers)   | In Progress | 12/1     |
| MuTr maintenance, repair and upgrade  | In Progress | 8/31     |
| Install VTX   | 9/13        | 12/1     |



## TECHNICAL SUPPORT 20-0

## Post Run 10 Tasks



| Task  | Start Date  | End Date |
|---|-------------|----------|
| Send mass flowmeters out for recalibration (DC/PC, MuID, TOF.W) | In Progress | 11/30    |
| AH Crane 110 switch for lockout                                 | In Progress | 9/30     |

## PH ENIX

## This Week:

Complete design of survey/installation tools and fixtures for VTX

Continue fabrication of parts, installation tools and fixtures for absorber & VTX

WP for VTX

Continue MuTr maintenance, troubleshooting & Repair

Continue Mu Trigger maintenance, troubleshooting & Repair

Install W1, W2, W3 & W4 ½ octants, upper (above MuID steel) supports & west pitch control

Finish Locating & Welding Absorber support stubs in North Flower Pot external cavity

Receive absorbers (final shipment) from Vendor

Receive and modify absorber transport and rotation cart

Begin Absorber Installation

Future upgrades support



## Next Week

Continue fabrication of parts, installation tools and fixtures for absorber & VTX

Continue MuTr maintenance, troubleshooting & Repair

Continue Mu Trigger maintenance, troubleshooting & Repair

Install W5, W6, W7 & W8  $\frac{1}{2}$  octants, upper supports & pitch control

Finish Locating & Welding Absorber support stubs in South Flower Pot external cavity

Finish transport and rotation cart

Continue Absorber Installation

Future upgrades support





















## TECHNICAL SUPPORT 20-0

PH**ENIX** 

## Removal of Existing Beampipe

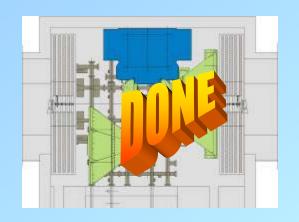


# TECHNICAL NUPPORT 20-0



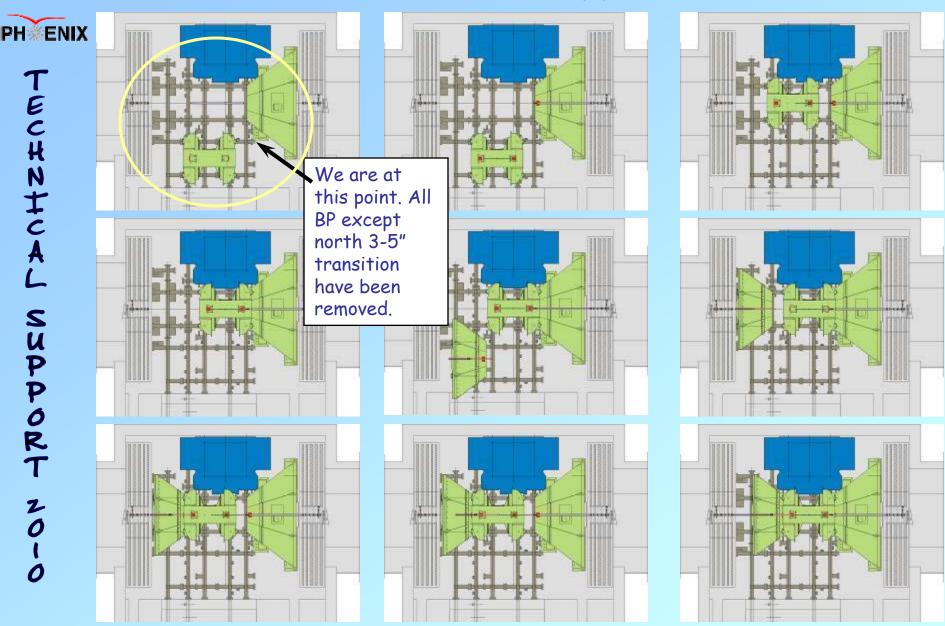


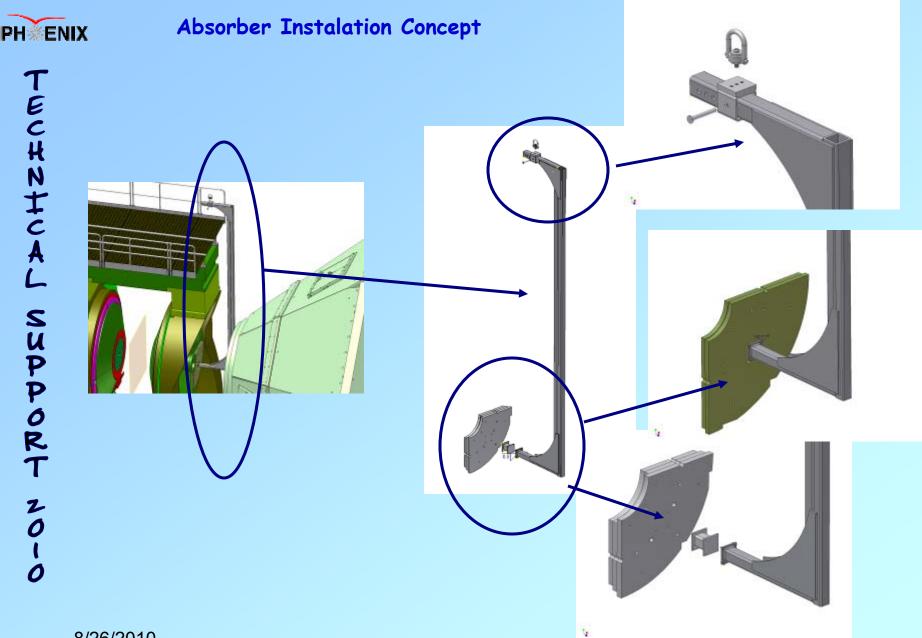




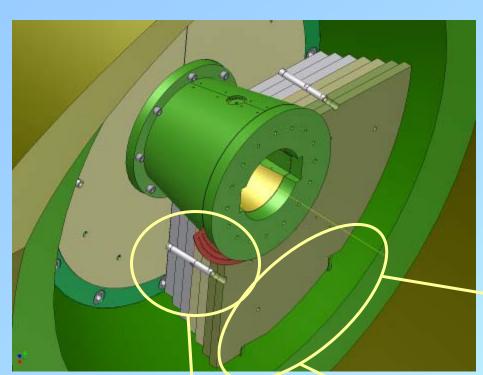


## Installation of New Beampipe

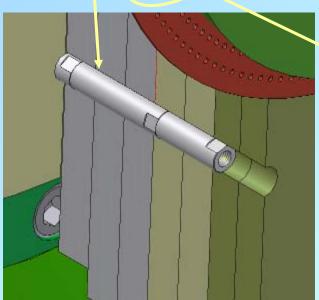


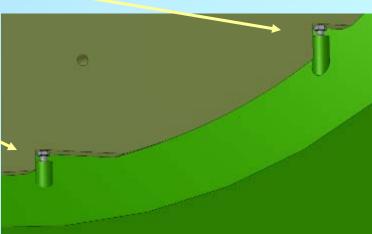


## PH ENIX



RPC Absorber Installation begins next week







## RPC Gas System







Plumbing for straight through rack 80% done. Waiting for the flow controllers at the factory and a few fittings. Wiring will follow.

Rack for south tunnel 90% done..

Bubblers for tunnels are done and tested. Working on mixing panel.

Parts for tunnel distribution system are all here.

Temp panel for testing South chambers has been installed. First two chambers tested fine for leaks.





Couplings tested and approved

All couplings and gasket material are in my lab.

Gaskets are being cut to size.



## Flow controller Re-Calibration

6 of the 7 flow controllers have been packed in a box. Still waiting for the Mutr guys to be done with the CO2 unit. Will send it out to the vendor the week of Sept 6<sup>th</sup>.

Approved purchase order and shipping memo are in the system.

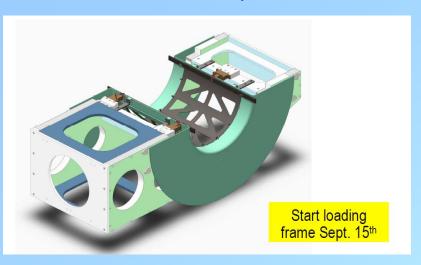


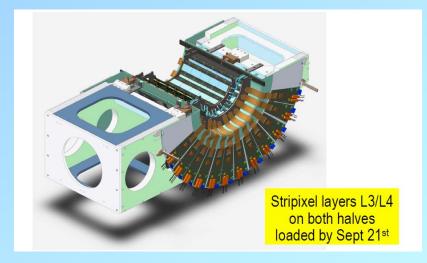
## VTX cooling

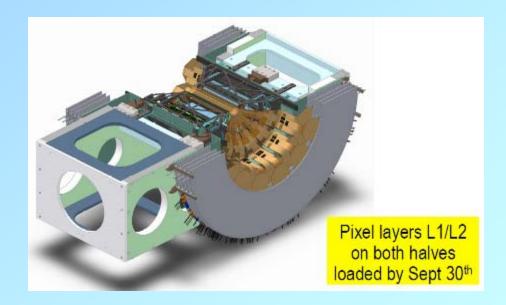
- •Chillers should be here soon.
- •Location of chillers has been determined.
- •Parts for distribution manifold have been order. Assembly of some parts started.
- •Novec web Req sent to Ed.

PH**ENIX** 

## VTX Final Assembly

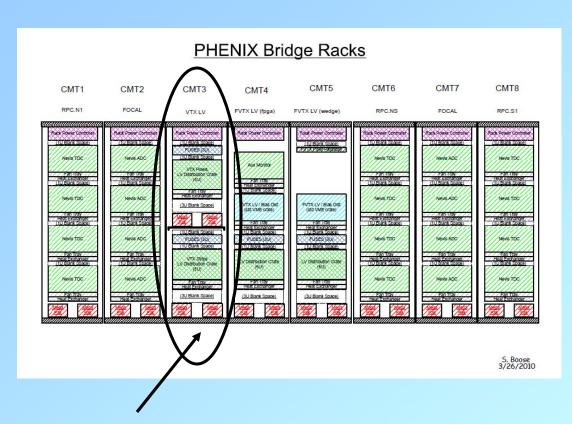






## PH ENIX

## Bridge Work this shutdown



This rack to be installed this summer

- 1. HBD, RXNP Racks to be removed intact
- 2. Remove electric panels from 2 north sections of bridge
- 3. Tempoary support for water pipes and cable tray
- 4. Remove 2 north sections of bridge to enable absorber installation
- Reinstall 2 north sections, reconnect plumbing and cable trays to 2 north sections of bridge
- 6. Upgrade electric service to support 8 racks
- 7. Install 1-3 racks for VTX/ FVTX electronics



## VTX Thermocouples



| To Order (Spe                   | ecify N          | lode | I Number       | )                  |                     |                    |
|---------------------------------|------------------|------|----------------|--------------------|---------------------|--------------------|
| Alloy Type                      | Codii<br>Color L | ng   | Pins<br>(Male) | Price<br>pkg of 20 | Sockets<br>(Female) | Price<br>pkg of 20 |
| Iron (+)                        | BLK              | M    | HPC-IR-P       | \$60               | HPC-IR-S            | \$100              |
| Constantan (-)                  | YEL              | N    | нрс-со-р       | 100                | HPC-CO-S            | 100                |
| Copper (+)                      | RED              | С    | HPC-CU-P       | 80                 | HPC-CU-S            | 80                 |
| CHROMEGA®(+)                    | WHIT             | Р    | HPC-CH-P       | 68                 | HPC-CH-S            | 100                |
| ALOMEGA® (-)                    | GRN              | R    | HPC-AL-P       | 68                 | HPC-AL-S            | 100                |
| *Gold-Plated<br>(Uncompensated) | Cole             |      | HPC-AU-P       | 15                 | HPC-AU-S            | 20                 |

Sealing plugs, model no. MTC-HP, \$.50 each.

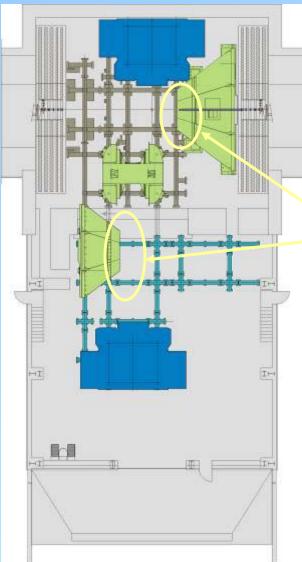
For use with non-thermocouple wire in same body.
Grammets available. Consult Sales Department for price and delivery.
† Pins have red, yellow and brown color bars; sockets have red, blue and black color bars.

G-53



# TECHNICAL NUPPORT 20-0





Remaining mid shutdown work:
MuTr and MuTrigger Stations 1
and lower sections of stations 2
& 3, North & South

Mid shutdown work on EC, & WC is finished. Work on MuTr and MuTrigger Stations 1, 2 and 3, North and south continues.



## New Beampipe Pre-Installation Prep

| Task  | <u>Due By</u> | <u>NOTES</u>                                    |
|---|---------------|---|
| Receive bp back at BNL                              | Done?         | Mapes, Riggers to move from rec'g to CAD        |
| Final acceptance and inspection bp and sections     | 8/31/2010     | Mapes, Riggers to<br>move from CAD to<br>PHENIX |
| Fabricate BP installation and survey tools/fixtures | 8/31/2010     | , CS  |

| <u>Task</u>  | <u>Due By</u> | <u>NOTES</u>  |
|--|---------------|---|
| Design fixtures, techniques and mockups for installation, alignment and survey   | Done?         | PHENIX Design & Engg                                  |
| Beampipe & VTX Installation Work Permits   | Done?         | D. Lynch, CAD Safety<br>Approval                      |
| BigWheel Fabrication & Procurement   | 9/3/2010      | PHENIX, CS  |
| Receive, inspect, test, rework and qualify components, assembly tools and fixtures, electronics for racks, cables, cable management etc. | In Progress   | PHENIX Design & Engg                                  |
| Fabricate fixtures, techniques and mockups for installation, alignment and survey  | 9/15/2010     | CS, PHENIX Techs                                      |
| Assemblies, Mock installations/alignments, bench tests   | 8/31/2010     | PHENIX Techs  |
| Receive & inspect components (installation, support, alignment & Survey)   | 9/15/2010     | PHENIX Techs  |
| Cooling system procurement   | 9/30/2010     | Pisani Coordinate with CAD Cooling Water, Electricain |



## RPC3 Pre-Installation Prep

| <u>Task</u>                            | <u>Due By</u> | <u>NOTES</u>      |
|--|---------------|-------------------|
|  | 0/4/0040      | In Progress @ RPC |
| Assemble, test and burn-in 1/2 octants | 9/1/2010      | Factory           |

## Beampipe De-installation

| <u>Task</u>                    | <u>Due By</u> | <u>NOTES</u> |
|--------------------------------|---------------|--------------|
| Remove north 3 to 5 transition | Done          | PHENIX Techs |

## Absorber Installation

| <u>Task</u>   | Due By          | <u>NOTES</u>                                 |
|---|-----------------|--|
| Test Absorber installation fixture                          | Done            | Hynan & Gaffney to witness                   |
| Weld Absorber support stubs into flower pot exterior cavity | In Progress/9/2 | CS Field welding; coordinate with Al Farland |
| Preassemble Absorber Segments                               | 9/3/2010        |  |
| Install North Absorber                                      | 9/3/2010        | Use small manlift                            |
| Install South Absorber                                      | 9/10/2010       | Use small manlift                            |

## Beampipe De-installation

| PH*E | PH <sup>*</sup> ENIX           |               |              |
|------|--------------------------------|---------------|--------------|
|      | <u>Task</u>                    | <u>Due By</u> | <u>NOTES</u> |
| 7    | Move CM south and east         | Done          | PHENIX Techs |
|      | Remove north 3 to 5 transition | In Progress   | PHENIX Techs |

## Absorber Installation

| <u>Task</u>   | <u>Due By</u> | <u>NOTES</u>                                 |
|---|---------------|--|
| Test Absorber installation fixture                          | 8/20/2010     | Hynan & Gaffney to witness                   |
| Weld Absorber support stubs into flower pot exterior cavity | 8/31/2010     | CS Field welding; coordinate with Al Farland |
| Preassemble Absorber Segments                               | 8/31/2010     |  |
| Install North Absorber                                      | 8/26/2010     | Use small manlift                            |
| Install South Absorber                                      | 9/3/2010      | Use small manlift                            |

# TECHNICAL SUPPORT 20-0

## New Beampipe installation

| <u>Task</u>   | Due By     | <u>NOTES</u>                    |
|---|------------|---------------------------------|
| Prepare north 3 to 5 transition for installation with roller guides, bakeout wrap and thermocouples           | 8/27/2010  | PHENIX Techs & CAD Vacuum Techs |
| Install north 3 to 5 transition in MMN  | 8/31/2010  | PHENIX Techs                    |
| Prep CM North and South for Absorber and install  | 9/10/2010  | PHENIX Techs                    |
| Labor Day Lab Holiday   | 9/6/2010   | Enjoy                           |
| Install new Be pipe in CM on temp supports  | 9/14/2010  | PHENIX Techs                    |
| Move CM back to beamline & connect $$ new Be BP to 1-5/8 transition and bellows and north 3-5 transition      | 9/17/2010  | PHENIX TechsPHENIX<br>Techs     |
| Move CM to run position   | 9/17/2010  | PHENIX Techs                    |
| Prealign Be/Alum pipe with transitions attached on new BP supports At MPC north, BBC south and north nosecone | 9/17/2010  | Surveyors & PHENIX<br>Techs     |
| Prepare south 3 to 5 transition for installation with roller guides, bakeout wrap and thermocouples           | 9/20/2010  | PHENIX Techs                    |
| Install south 3 to 5 transition, bellows and 1-5/8 to 3" transition in MMS                                    | 9/21/2010  | PHENIX Techs                    |
| Move MMS back into IR on beamline   | 9/22/2010  | PHENIX Techs                    |
| Move CM south, slide Transition ass'y in MMS north and connect to new Be BP                                   | 9/23/2010  | CAD Vac & PHENIX Techs          |
| Move CM and MMS north and install south spool. Leak check. Move MMS South                                     | 9/23/2010  | PHENIX Techs                    |
| Install temporary bakeout supports  | 9/23/2010  | PHENIX Techs                    |
| Install bakeout blankets and monitoring   | 9/23/2010  | CAD Vacuum Techs                |
| Bakeout New BP and activate NEG coating   | 9/30/2010  | CAD Vacuum Techs                |
| Leak check BP   | 9/30/2010  | CAD Vacuum Techs                |
| Re-install MPC's & BBC's including Cables and services  | 10/15/2010 | PHENIX Techs Concurrent         |
| Move CM to run position   | 10/15/2010 | PHENIX Techs                    |
| Final alignment of new BP   | 10/29/2010 | PHENIX Techs                    |

## TECHNICAL NUPPORT 20-0

## VTX Installation, VTX Services and Electronics

| <u>Task</u>   | <u>Due By</u>      | <u>NOTES</u>                         |
|---|--------------------|--------------------------------------|
| Presurvey VTX ½ detectors in Chemistry lab  | 10/1/2010          | PHENIX TECHS an<br>BNL Survey, 1 wee |
| All VTX detector, support, installation, alignment and survey parts and assemblies complete, ready for installation | 10/1/2010          | All sources                          |
| Install and align VTX rails perpendicular to beam line  | 10/8/2010          | PHENIX Techs                         |
| Install and align west half detector module   | 10/15/2010         | PHENIX Techs & Surve                 |
| Install and align east half detector module   | 10/22/2010         | PHENIX Techs & Surv                  |
| Install mechanical support structures for VTX services and electronics  | 10/29/2010         | PHENIX Techs Concurrent Effort       |
| Install Cable trays   | 10/29/2010         | 1                                    |
| Install racks   | 10/29/2010         |                                      |
| Install chiller   | 10/29/2010         | 1                                    |
| Install cables, plumbing  | 10/29/2010         |                                      |
| Connect cables and plumbing   | 10/29/2010         | V                                    |
| Thanksgiving and Black Friday Holiday   | 11/25 & 11/26/2010 | Enjoy                                |
| Test, de-bug and commission   | 12/1/2010          | PHENIX Techs                         |



## RPC3 South Prep, Early Shutdown

| <u>Task</u>  | <u>Due By</u> | <u>NOTES</u> |
|--|---------------|--------------|
| Drill and tap $\frac{1}{2}$ octant and rotating piston mounting points | In progress   | PHENIX Techs |

## RPC3 South Installation



| <u>Task</u>   | <u>Due By</u>                                 | NOTES                     |
|---|---|---------------------------|
| Install pitch control rails on pedestal and gap 5 east & west inner walls   | In Progress                                   | PHENIC Techs              |
| Install upper suspension support hardware   | 8/27/2010                                     | PHENIC Techs              |
| Install $\frac{1}{2}$ octants, 2 at a time in accordance with work plan/work permit   |   | •                         |
| Transport $\frac{1}{2}$ octants 2 at a time from RPC factory to south tunnel on angled transport carts  |   |                           |
| Transfer $\frac{1}{2}$ octants from angled transport carts one at a time to temporary free standing and re-orienting roller fixture (fore and aft wheels and axel)                            |   |                           |
| Lift (and re-orient if appropriate) $\frac{1}{2}$ octant and install into base structure, previously installed $\frac{1}{2}$ octant or upper suspension hardawre as appropriate per work plan |   |                           |
| Pre-align each $\frac{1}{2}$ octant as installed  |   |                           |
| Perform electrical integrity tests before proceeding to next pair of $\frac{1}{2}$ octants  |   |                           |
| After all $\frac{1}{2}$ octants are in place and tested, join east and west halves of full south station 3 detector and align to survey markers   | In Progress, expected completion by 9/16/2010 | Riggers &<br>PHENIX Techs |





## RPC3 South Integration

| Task  | <u>Due By</u>      | NOTES   |
|---|--------------------|---|
| Final survey  | 10/8/2010          | Surveyors                                     |
| Install new cable trays and piping supports                         | 10/15/2010         | Electrician, PHENIX Techs earlier if possible |
| Re-install MuID wiring and pipes                                    | 11/5/2010          | PHENIX Techs                                  |
| Install south thermal/vapor barrier                                 | 11/19/2010         | CAD contractor                                |
| Thanksgiving and Black Friday Holiday                               | 11/25 & 11/26/2010 | Enjoy   |
| Re-install MuID gas rack  | 11/30/2010         | PHENIX Techs                                  |
| Commissioning and final acceptance tests                            | 11/30/2010         | RPC Group                                     |
| Install RPC3 HV, LV and signal wiring and gas lines                 | 11/30/2010         | PHENIX Techs                                  |
| Install RPC3 South gas distribution rack                            | 11/30/2010         | PHENIX Techs                                  |
| Re-install shielding  | 11/30/2010         | Riggers                                       |
| Install RPC3 South environmental controls (heaters and thermostats) | 11/30/2010         | Electrician                                   |



| PH EN | NIX | Shutdown | 2010 | Other | Work |
|-------|-----|----------|------|-------|------|
|       |     |          |      |       |      |

| <u>Task support</u>  | <u>Due By</u>      | <u>NOTES</u>   |
|--|--------------------|--|
| RPC3 North unfinished business                                       | 9/30/2010          | Electronics and cabling, grounding issues, environmental controls                    |
| MuTrigger FEE unfinished business                                    | 9/30/2010          | MMS cable trays,   |
| DC/PC maintenance/repair (after EC is in)                            | 11/15/2010         | FEM and wire troubleshooting and repairs, major efforts will require longer shutdown |
| Thanksgiving and Black Friday Holiday                                | 11/25 & 11/26/2010 | Enjoy  |
| PHENIX Survey Review   | 11/30/2010         | PHENIX Techs & Survey  |
| Procedure Updating   | 11/30/2010         | PHENIX Engineering   |
| Gas Mixing House maintenance & Repair                                | 11/30/2010         | Tasks TBD  |
| PHENIX Infrastructure maintenance, repair, upgrade                   | 11/30/2010         | TBD  |
| Gas Pad: new gas storage details                                     | 11/30/2010         | Tasks TBD  |
| Gas Pad services for new dewar support, maintenance and improvements | 11/30/2010         | TASKS TBD  |



## Shutdown 2010 Other Work (Cont'd)

| <u>Task support</u>   | Due By     | <u>NOTES</u>  |
|---|------------|---|
| AH Flood prevention improvements  | 11/30/2010 | Tasks TBD   |
| IR Bridge Electrical service upgrade  | 11/30/2010 | Support for 4 full racks in 2010, 4 more (8 total) in future, PHENIX Techs & Electrician  |
| RPC Factory Support   | 11/30/2010 | Tasks TBD   |
| Rack Room upgrade   | 11/30/2010 | Includes New EB Switch  |
| PHENIX Design Documentation   | 11/30/2010 | PHENIX Engineering  |
| CM Crane  | 11/30/2010 | Currently on hold for re-evaluation   |
| CM alignment stops  | 11/30/2010 | TBD   |
| Gas System maintenance, repair, upgrade   | 11/30/2010 | Tasks TBD   |
| Other subsystem maintenance, repair/upgrade   | 11/30/2010 | Tasks TBD   |
| Future upgrade support  | 11/30/2010 | RPC1, FVTX, FOCal, other Tasks TBD  |
| Prepare for Run 11: EC platforms fold up in AH, fold down in IR, EC Equipment lift take down in AH, Install in IR, Install shielding wall base and build shielding wall & Install MMS Lampshade | 11/30/2010 | Normal end of shutdown tasks, typically taking 3-4 weeks: Riggers & Carpenters, CAD Techs |
| Run 11 Start  | 12/1/2010  |   |
| End of Shutdown Party   | ~12/3/2010 |   |

## PH ENIX

## 2010 Building Maintenance Issues

Roof leaks in utility bathroom at northwest corner behind tech offices, over door between rack room and assembly hall and over door between control room and elect. ass'y room.



Roof laser room and IR (southeast corner)

Flooding in AH/ Driveway heaving [Lake PHENIX]



Summer Sunday Spruce Up







To be located in front of AC on east side of GMH

Proposed shed addition to Gas Mixing house

RPC requirements. No flammable gas, standard shed with heat. Barn style doors desirable. Palce on asphalt with no threshold to allow bottle management with pallet lifter.



## PHENIX Procedure Review Current Status:

## 148 Procedures Identified

- 85 Made Inactive (not currently in use, will require revision to re- activate if and when necessary, available for reference purposes)
- 9 CAD procedures relevant to PHENTX, all all all the had available on the CAD web site
- 11 Procedures (never previously formalized) (3 are ready for review)

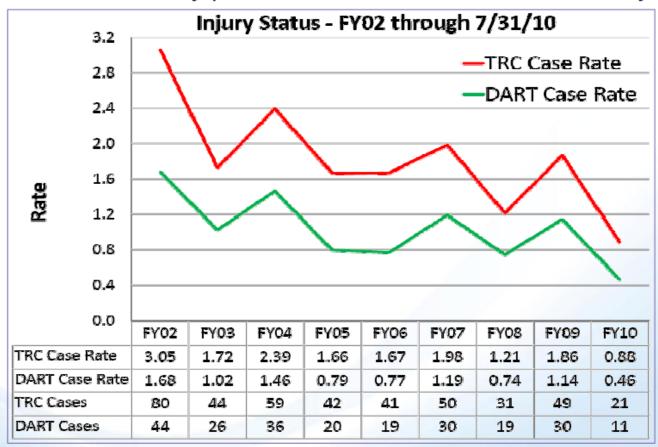
Web retrieval of latest procedures now available from PHENIX Internal:

http://www.phenix.bnl.gov/WWW/INTEGRATION/ME&Integration/DRL\_procedures.htm



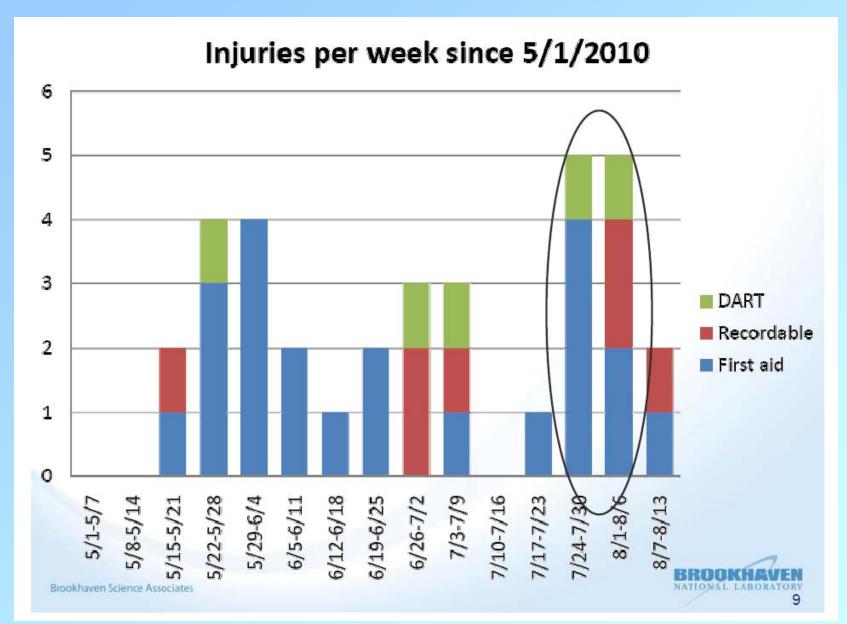
## How are we doing?

Our overall safety performance is the best in our history



Brookhaven Science Associates







## Where are injuries occurring? Injuries by Directorate As of 8/2/2010 Director's Office, 4(1)CEGPA, 2 Nuclear & Particle Physics, 5. Environmental & Life Sciences, 5 ES&H, 2 (1) Basic Energy Sciences, 1 \_Finance, 4 Facilities &\_ \_Global & Regional Operations, 30

Note: black is total number of injuries, red indicates

contractor injuries

8/26/2010

(5)

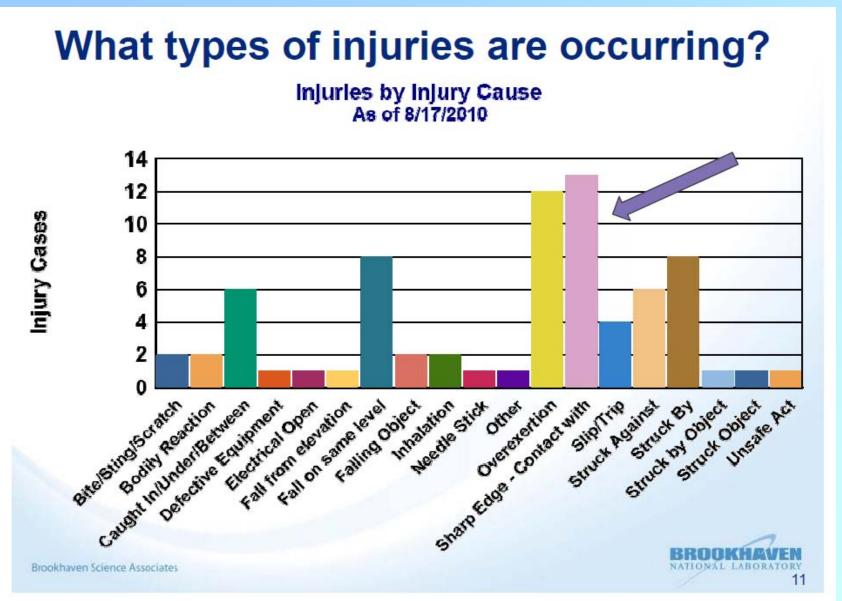
Brookhaven Science Associates

10

Solutions, 1

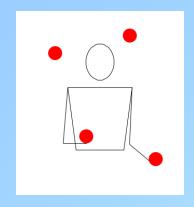
Light Sources, 9 (4)







## Where To Find PHENIX Engineering Info



We've got a lot of things going on at the same time so be careful, be safe and we'll get through the tough parts soon





Links for the weekly planning meeting slides, archives of past meeting slides, long term planning, pictures, videos and other technical info can be found on the PHENIX Engineering web site:

http://www.phenix.bnl.gov/WWW/INTEGRATION/ME&Integration/DRL\_SSint-page.htm



Completed Tasks

| <u>Task</u>   | <u>Due By</u> | <u>NOTES</u>                    |
|---|---------------|---------------------------------|
| Prepare Installation Plan   | Done          | Done                            |
| Design Absorber Installation fixtures & tools   | Done          | PHENIX Engg & Design            |
| Receive purchased parts   | Done          | PHENIX Techs                    |
| Fabricate PHENIX parts  | Done          | CS, PHENIX Techs                |
| Receive and inspect CS fabricated parts   | Done          | PHENIX Techs                    |
| Prepare work permit for installation  | Done          | Currently at CAD Safety Approva |
| Pre-Assemble base components at PHENIX  | Done          | PHENIX Techs                    |
| VTX Installation Plan   | Done          | PHENIX Design & Engg            |
| Installation Review (ESRC)  | Done          | Set up With Y. Makdisi          |
| Specify components, assembly tools and fixtures, electronics for racks, cables, cable management etc. | Done          | PHENIX Design & Engg            |
| End of run 10 (Party)   | Done          | Done                            |
| Commissioning Tests (HV, Mixed gas and Freon only)  | Done          | Done                            |
| Choreograph removal of old beampipe and installation of new (final)                                   | Done          | Done                            |
| Beampipe Installation Review (Final)  | Done          | Done                            |





| <u>Task</u>  | <u>Due By</u> | <u>NOTES</u>                             |
|--|---------------|--|
| DAQ Tests  | Done          | PHENIX                                   |
| Purge Gas From Detectors   | Done          | PHENIX, CAD remove<br>LOTO               |
| Install and align VTX rail attachment hardware to CM                               | Done          | Using the HBD I-beam attachment hardware |
| Install and align VTX rails parallel to beam line                                  | Done          | Using the HBD I-beams                    |
| Remove BP Collar   | Done          | Done                                     |
| Move MMS south   | Done          | PHENIX Techs                             |
| Prep EC for move to EC   | Done          | PHENIX Techs                             |
| Close North and South BP gate valves and lock closed for until new BP is installed | Done          | CAD Vac Group                            |
| Open and disassemble wall  | Done          | Done                                     |
| Remove EC ladder and fold platforms  | Done          | Carpenters & Riggers                     |
| Move EC to AH  | Done          | PHENIX Techs                             |
| Install cart   | Done          | PHENIX Techs                             |
| Move Collars to AH   | Done          | PHENIX Techs                             |
| Install decking  | Done          | PHENIX Techs                             |
| Remove/relocate shielding  | Done          | Riggers                                  |
| Remove crystal palace & vapor barrier  | Done          | CAD                                      |
| Install Manlift  | Done          | PHENIX Techs                             |
| Send beampipe to CERN for NEG Coating  | Done          | CAD Vacuum                               |





| <u>Task</u>   | <u>Due By</u> | NOTES   |
|---|---------------|---|
| Remove RPC2 Prototype, support brackets, cabling & Piping   | Done          | In Progress PHENIX<br>Techs, CAD Techs,<br>Electrican |
| Remove MMS east vertical lampshade  | Done          | CAD Techs   |
| 4th of July Holiday & Floating<br>Holiday   | Done          |   |
| Remove HBD's and HBD cables<br>Remove RXNP's and cables   | Done          | PHENIX Techs ASAP                                     |
| Remove/relocate shielding   | Done          | Riggers   |
| Remove crystal palace & vapor barrier   | Done          | CAD   |
| Inspect Gap 5 south for legacy items/problems   | Done          | PHENIX Techs  |
| Design BP installation and survey tools/fixtures  | Done          |   |
| Receive BP transitions & spool back at BNL from SAES after NEG Coating                                    | Done          |   |
| Remove BBC's  | Done          | PHENIX Techs ASAP                                     |
| Remove wiring, walkovers, FCAL and scintillator hardware that would otherwise interfere with installation | Done          | PHENIX Techs  |
| 4th of July Holiday   | Done          | Enjoy   |
| Address legacy items/problems as convenient prior to shutdown start                                       | Done          | PHENIX Techs in progress                              |





| <u>Task</u>  | <u>Due By</u> | NOTES                              |
|--|---------------|------------------------------------|
| Remove RPC prototype                                 | Done          | PHENIX/CAD Techs                   |
| Position MMS for Vacuum break                        | Done          | PHENIX Techs                       |
| Break vacuum on north side of MMS                    | Done          | CAD Vac Techs                      |
| Remove south bellows                                 | Done          | CAD Vac Techs                      |
| Gas Pad expansion completion (grouting)              | Done          | Tasks TBD                          |
| Remove MPC's   | Done          | PHENIX Techs ASAP                  |
| Install Temporary supports for old BP                | Done          | Supports TBD                       |
| Move MMS north, remove spool and south3-5 transition | Done          | PHENIX Techs                       |
| Move the MMS south & Prep MMS for move to AH         | Done          | Begin MMS prep with shutdown start |
| Move CM south, remove north bellows                  | Done          | PHENIX & CAD Vac<br>Techs          |
| Move old Be bp south into MMS and move CM north      | Done          | PHENIX Techs                       |
| Move MMS to shutdown park position                   | Done          | PHENIX Techs                       |
| Remove old Be BP                                     | Done          | PHENIX Techs                       |
| VTX Survey Plan                                      | Done          | Consult w/ F. Karl                 |
| Install lighting & relocate sensors as necessary     | Done          | Electrician in progress            |



| <u>Task</u>   | Due By | NOTES                                 |
|---|--------|---------------------------------------|
| Temporarily relocate, re-position or otherwise address interfering piping, cable trays                  | Done   | PHENIX (w/ CAD<br>Help?), Electrician |
| Pre-survey ½ octant reference points  | Done   | PHENIX Techs & Surveyors              |
| Build/install access and work platforms for walk on top of MuID steel including stairs from MMS eyebrow | Done   | Carpenters                            |
| Final cleaning and prep of gap 5 for grouting   | Done   | PHENIX Techs                          |
| Position lifting equipment in tunnel  | Done   | Riggers                               |
| Install and align base structures on east and west sides of gap 5                                       | Done   | PHENIC Techs & Riggers                |
| Prepare for grouting  | Done   | PHENIC Techs &<br>Masons              |
| RHIC Summer Sunday Tour   | Done   |                                       |
| Fabricate/procure Absorber Installation fixtures & tools  | Done   | PHENIX Techs                          |
| Fabricate Absorber Details  | Done   | Vendor & CS - RPC<br>Group and PHENIX |
| Move CM south and east  | Done   | PHENIX Techs                          |
| Pre-installation orientation meeting with masons and riggers  | Done   | PHENIX Techs Masons<br>& Riggers      |





| <u>Task</u>  | <u>Due By</u> | NOTES                    |
|--|---------------|--------------------------|
| Move east and west base structures into south tunnel and assemble on east and west sides of pedestal respectively. | Done          | Riggers & PHENIX techs   |
| Install grout  | Done          | PHENIC Techs &<br>Masons |
|  |               |                          |
|  |               |                          |